

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER, AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL, ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

#### NOTES:

#### 1. GENERAL REQUIREMENTS:

- A. UNITS SHALL MEET THE APPLICABLE REQUIREMENTS OF MIL-R-93 CHARACTERISTIC C; EXCEPT AS AND IN ADDITION TO THE REQUIREMENTS SPECIFIED HEREIN.
- B. RESISTANCE VALUES: SEE TABLE.
- C. RESISTANCE TOLERANCE: SEE TABLE.
- D. POWER RATING: 1/10 WATT AT +125°C.
- E. TEMPERATURE COEFFICIENT:  $\pm 15$  PPM/°C OVER OPERATING TEMPERATURE RANGE, EXCEPT FOR VALUES BELOW 20 OHMS WHICH SHALL BE  $\pm 0.006\%$  MAXIMUM.
- F. MAXIMUM VOLTAGE RATING: 150 VOLTS.
- G. STABILITY: 100 PPM/YEAR AT +25°C AT 1/2 RATED POWER.
- H. TEMPERATURE RANGE: MINUS 65°C TO PLUS 125°C.

#### 2. CONSTRUCTION REQUIREMENTS:

- A. LEADS: UNITS SHALL HAVE WELDABLE GRADE A NICKEL LEADS PER ND PS1015400.
- A CERTIFICATE OF COMPLIANCE OF LEAD MATERIAL SHALL ACCOMPANY EACH LOT SHIPPED.
- EACH LEAD SHALL BE CAPABLE OF WITHSTANDING TWO (2) BENDS UNDER A TWO (2) POUND VERTICAL PULL (LEADS VERTICAL WITH RESPECT TO UNIT BODY). TWO (2) BENDS SHALL BE ACCOMPLISHED BY MOVING THE BODY OF THE UNIT, WHILE IN THE PLANE, THROUGH 90° IN ONE DIRECTION, THEN BACK 180° TO THE OPPOSITE DIRECTION AND BACK 90° TO THE ORIGINAL POSITION. NO MECHANICAL DAMAGE OR LACK OF PERFORMANCE SHALL BE EVIDENCED AFTER THE TEST.
- EACH LEAD SHALL BE CAPABLE OF WITHSTANDING AN AXIAL PULL OF FOUR (4) POUNDS MINIMUM.
- B. MARKING: MARK UNITS PER MIL-STD-130 WITH MANUFACTURER'S NAME AND/ OR SYMBOL, TYPE NUMBER, RESISTANCE VALUE AND TOLERANCE.
- MARKING OF UNIT PACKAGES AND EXTERIOR SHIPPING CONTAINERS SHALL INCLUDE NASA NUMBER, DASH NUMBER AND REVISION LETTER.

#### 3. ENVIRONMENTAL REQUIREMENTS:

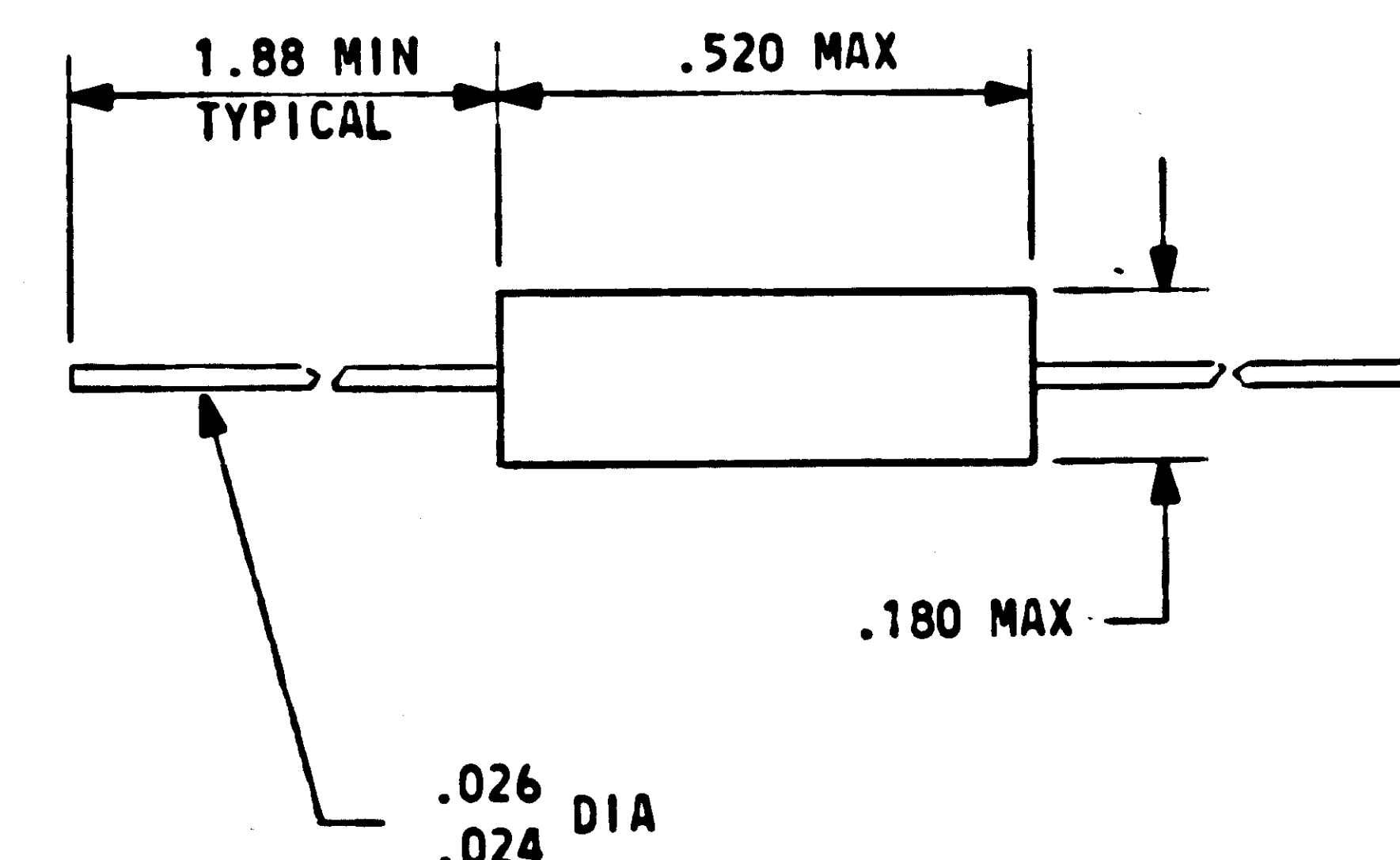
- A. UNITS SHALL BE CAPABLE OF MEETING THE ENVIRONMENTAL REQUIREMENTS OF ND 1002000.
4. BURN IN: 100 HOURS @125°C @1/10 WATT. REJECT ANY PART WHICH CHANGES MORE THAN 0.1% OR CANNOT MEET PURCHASE TOLERANCE.
5. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS OF ND 1015404 CLASS I.
6. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.

PROCURE ONLY FROM APPROVED SOURCES LISTED ON ND1002034 FOR THIS DRAWING

DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL
1	4,000	$\pm 0.1\%$	53	25,000	$\pm 0.1\%$	107	100	$\pm 1.0\%$
2	87,500		54	12,500		108	150	
3	88,750		55	8,330		109	7,500	
4	90,000		56	6,250		110	4,700	
5	91,250		57	1	$\pm 0.5\%$	111	91,000	
6	92,500		58	2				
7	93,750		59	3				
8	95,000		60	4				
9	96,250		61	5				
10	97,500		62	6				
11	98,750		63	7				
12	100,000		64	8				
13	101,250		65	9				
14	102,500		66	10				
15	103,750		67	11				
16	105,000		68	12				
17	106,250		69	13				
18	107,500		70	14				
19	108,750		71	15				
20	110,000		72	16				
21	111,250		73	17				
22	112,500	$\pm 0.1\%$	74	18				
23	50	$\pm 1\%$	75	19				
24	374		76	82,500				
25	400		77	83,750				
26	600		78	85,000				
27	650		79	86,250				
28	700		80	87,500				
29	750		81	88,750				
30	775		82	90,000				
31	850		83	91,250				
32	925		84	92,500				
33	1,000		85	93,750				
34	1,100		86	95,000				
35	1,200		87	96,250				
36	3,300		88	97,500	$\pm 1.0\%$			
37	10,000		89	98,750				
38	22,500		90	100,000				
39	35,000		91	101,250				
40	45,000		92	102,500				
41	67,500		93	103,750				
42	90,000		94	105,000				
43	112,000		95	106,250				
44	134,500		96	107,500				
45	157,000		97	108,750				
46	179,500		98	110,000				
47	202,500		99	111,250				
48	225,000	$\pm 1\%$	100	112,500				
49	39,000		101	113,750				
50	20,000		102	115,000				
51	5,000		103	116,250				
52	25,000		104	117,500				
			105	16,000				
			106	6,200				

FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 00162 DATE 12-12-62



Ⓔ REPLACES REV D WITH CHANGE

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DRAWN <u>W. H. H. H.</u> DATE <u>2-1-63</u>		RESISTORS, FIXED, WW, PRECISION	
CHECKED <u>W. H. H. H.</u> DATE <u>2-1-63</u>		SPECIFICATION CONTROL DRAWING	
APPROVAL <u>W. H. H. H.</u> DATE <u>1-30-63</u>		CODE IDENT NO. SIZE NASA DRAWING NO.	
NASA APPROVAL <u>W. H. H. H.</u> DATE <u>1-30-63</u>		C 1010377	
MIT APPROVAL <u>W. H. H. H.</u> DATE <u>1-30-63</u>		SCALE NONE WT SHEET 1 OF 1	

INCHES  
0 1 2  
PHOTOGRAPHIC SCALE ONLY